



Press Release

Immediate Release

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First Double-Shell Tank Leaks at Hanford Nuclear Site

“This Changes Everything,”New Urgency for Building More Tanks

Seattle, WA: Today a public interest group released evidence that the first double-shell tank leak of highly radioactive waste has been detected at the Hanford nuclear site.

Hanford Challenge disclosed a memo to the Washington State Department of Ecology dated August 14th, 2012 that acknowledges a highly-radioactive chemical waste leak that was detected in early August from Tank AY-102 on the floor of the annulus (space between the walls) of the tank.

Radioactive waste was found in two locations, according to the document, one of them in a “mound approximately []2 ft. x 3 ft. x 8 inches.” The material was dry.

The AY-102 tank is one of 177 underground nuclear waste tanks containing an estimated 56 million gallons of high-level nuclear waste. 67 Hanford tanks have leaked over one million gallons to the soil, but until recently, all of them were the older-style, single-shell tanks. The AY-102 tank is a *double-shell* waste tank, and was previously considered to be stable and non-leaking. Double-shelled tanks have two steel walls, with a “tank within a tank” design that adds to the safety margin.

Hanford is widely acknowledged to be the most contaminated facility in the United States.

“This changes everything. It is alarming that there is now solid evidence that a Hanford double-shell has leaked,” said Hanford Challenge’s Executive Director, Tom Carpenter. “These tanks were supposed to last another 40 years, but that thinking has been superseded by this new reality.”

The State of Washington entered into a cleanup agreement with the Department of Energy with deadlines that allow the high-level tanks to not be emptied until 2052. The assumption has always been that the double-shelled tanks would continue to hold their wastes throughout that time frame.

Carpenter stated, “This new evidence gives urgency to the suggestion that the DOE build more tanks. We always knew the Double Shell Tanks would leak, we just did not know when. We have the first, how many will be leakers in another 40 years? The only good news here is that the waste from this tank leak was not in liquid form, and is apparently not yet affecting the environment.”

Hanford Challenge questioned the Department of Energy’s lack of transparency: “Officials have not made any kind of announcement about the leak, despite the fact that they have known for over a week. The era of secrecy and hiding problems is supposed to be over, but old habits apparently die hard,” said Carpenter.

Hanford Challenge has also cited the uncertainties around the opening of the Waste Treatment Plant, which is under scrutiny because of safety issues raised by whistleblowers, as another reason the government should immediately build a new set of tanks to temporarily store Hanford’s deadly waste.

- 30 -

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Hanford Tanks Under Construction (Department of Energy photo)

Issue: Routine periodic remote camera monitoring of the AY-102 annulus indicates a change from previous observations when material was found on the floor of the annulus.

Recent inspections (August 1-10) found material on the floor (volume change and color change). Inspection of the annulus noted the following;

- Material found in two locations near Riser 90
 - mound approximately (2 ft. x 3 ft. x 8 inches)
 - white material on both the refractory (tank sits on refractory) and annulus floor
- Material is dry (i.e., no standing water or indications of moisture)
- Two leak detection (ENRAF) and Constant Air Monitor (CAM) are operable in annulus
- Following inspections on August 10, camera equipment removed from annulus without incident (i.e., no contamination on equipment)
- Contamination levels higher than expected from a floor sample taken August 10

Ongoing Investigatory Actions

- Initiated camera installation in Riser 90 twice a week using approved monitoring plan
- Increased monitoring frequency of ENRAFs; monitor every shift
- Initiated Tank Leak Assessment Process, TFC-ENG-CHEM-D-42
- Developing tank history timeline, contents, operational events and radiological events
- Initiated activities to obtain samples of materials from both locations
- Documenting near term and long term actions

Near Term Path Forward

- Initiating planning to inspect all accessible areas of tank annulus
- Planning work package to sample and pump tertiary leak detection pit (confirms secondary liner integrity)

Long Term Actions

- Determine Extent of Condition (i.e., applicability to other tanks)
- Explore means for removing material from annulus

Conclusion

- Tank is Stable (no free liquid in the annulus)
- Increased Monitoring of Annulus
 - Visual monitoring twice a week
 - Level monitoring each shift
- Planning initiated for the following evolutions
 - Tank Annulus camera inspection (accessible areas)
 - Sample of material in both locations